

PCT

世界知的所有権機関  
国際事務局  
特許協力条約に基づいて公開された国際出願

<b>(51) 国際特許分類6</b> <b>C08K 5/15, 5/13, 5/521, 5/524, 5/527, 5/53, C08L 101/00</b>	<b>A1</b>	<b>(11) 国際公開番号</b> <b>WO99/54394</b>  <b>(43) 国際公開日</b> 1999年10月28日(28.10.99)
<b>(21) 国際出願番号</b> PCT/JP99/01999 <b>(22) 国際出願日</b> 1999年4月14日(14.04.99) <b>(30) 優先権データ</b> 特願平10/181174 1998年6月26日(26.06.98) JP 特願平PCT/JP98/04462 1998年10月2日(02.10.98) JP 特願平PCT/JP98/05829 1998年12月21日(21.12.98) JP <b>(71) 出願人 (米国を除くすべての指定国について)</b> 吉富ファインケミカル株式会社 (YOSHITOMI FINE CHEMICALS, LTD.)[JP/JP] 〒541-0046 大阪府大阪市中央区平野町二丁目6番9号 Osaka, (JP) <b>(72) 発明者 ; および</b> <b>(75) 発明者 / 出願人 (米国についてのみ)</b> 井上 健(INOUE, Takeshi)[JP/JP] 堀江松一(HORIE, Shoichi)[JP/JP] 〒871-8550 福岡県築上郡吉富町大字小祝955番地 吉富ファインケミカル株式会社 研究所内 Fukuoka, (JP)		<b>(74) 代理人</b> 高島 一(TAKASHIMA, Hajime) 〒541-0046 大阪府大阪市中央区平野町三丁目3番9号 (湯木ビル) Osaka, (JP) <b>(81) 指定国</b> CA, CN, ID, JP, KR, SG, US, 欧州特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE) <b>添付公開書類</b> 国際調査報告書 請求の範囲の補正の期限前の公開 ; 補正書受領の際には再公開される。
<b>(54)Title: STABILIZER FOR ORGANIC POLYMERIC MATERIAL AND ORGANIC POLYMERIC MATERIAL COMPOSITION</b>  <b>(54)発明の名称</b> 有機高分子材料用安定剤および有機高分子材料組成物  <b>(57) Abstract</b> A stabilizer composition for organic polymeric materials which comprises (a) a 6-hydroxychroman compound, (b) a phosphorus compound antioxidant selected among biphenylene phosphonite compounds, aryl phosphite compounds, pentaerythritol phosphite compounds, and oxaphosphocin compounds, and (c) a phenolic antioxidant, the amount of ingredient (a) and the sum of ingredients (b) and (c) being 0.5 to 10 wt.% and 99.5 to 90 wt.%, respectively, based on the total amount of ingredients (a), (b), and (c); and an organic polymeric material composition comprising an organic polymer and the stabilizer composition incorporated therein. By using the stabilizer composition as a stabilizing agent for an organic polymeric material, a stabilized organic polymeric material composition can be obtained which has excellent thermal stability during processing and is extremely industrially useful.		

AN 1999-633989 [54] WPIDS  
CR 1999-287731 [22]; 2000-126775 [09]  
DNC C1999-185235  
TI Stabilizer for organic polymeric material composition.  
DC A60 D23 E19 H07  
IN HORIE, S; INOUE, T  
PA (YOSH-N) YOSHITOMI FINE CHEM KK; (YOSH) YOSHITOMI FINE CHEM LTD  
CYC 25

PI WO 9954394 A1 19991028 (199954)\* JA 203p

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: CA CN ID JP KR SG US

JP 2001049127 A 20010220 (200114) 70p

ADT WO 9954394 A1 WO 1999-JP1999 19990414; JP 2001049127 A JP 2000-99499  
19990414, Div ex JP 2000-544732 19990414

PRAI WO 1998-JP5829 19981221; JP 1998-181174 19980626; WO 1998-JP4462  
19981002; JP 1998-108260 19980417

AN 1999-633989 [54] WPIDS

CR 1999-287731 [22]; 2000-126775 [09]

AB WO 9954394 A UPAB: 20010312\_

NOVELTY - A stabilizer composition comprises:

- (a) a 6-hydroxychroman compound;
  - (b) a phosphorus compound antioxidant; and
  - (c) a phenolic antioxidant;
- and is used for organic materials.

DETAILED DESCRIPTION - A stabilizer composition comprises:

- (a) a 6-hydroxychroman compound;
  - (b) a phosphorus compound antioxidant; and
  - (c) a phenolic antioxidant;
- and is used for organic materials.

(a) is at least one compound selected from compounds represented by  
general formula (1).

R1 = 1-18C alkyl group or 2-18C alkenyl group;

R2 = 1-5C alkyl group;

R3, R4, R5 = H or 1-4C alkyl group;

R6 = H or 1-5C alkyl group

(b) is at least one phosphorus antioxidant selected from compounds  
represented by general formulae (b-1), (b-2), (b-3) and (b-4).

(b-1) is represented by general formula (2) or (4):

(b-2) is represented by general formula (5), (6) or (7):

(b-3) is represented by general formula (8) or (9).

(b-4) is represented by general formula (12).

R7, R8 = 1-4C alkyl group;

R9 = H or CH3;

Q2 = group represented by formula (3);

i = 0 or 1;

$j = 0$  or  $1$  ;

$o =$  integer between  $1$  and  $10$  ;

$R_{10} = 1-18C$  alkyl, phenyl or group represented by (6) ;

$R_{12}, R_{13} = 1-4C$  alkyl group ;

$R_{14} = H$  or  $CH_3$  ;

$R_{11} = 1-18C$  alkyl,  $7-9C$  phenyl alkyl, cyclohexyl, phenyl group or group represented by (6);

$p = 3$ ;

$L_1 = 1,1,3$ -butanetriyl group;

$q = 1$  or  $2$ ;

$A =$  group represented by formula (10) when  $q=1$ , or  $2-18C$  alkylene,  $p$ -phenylene or  $p$ -biphenylene group when  $q=2$  ;

$R_{18}, R_{19} = 1-4C$  alkyl group;

$R_{20} = H$  or  $1-4C$  alkyl group;

$R_5, R_{16} = 1-4C$  alkyl group;

$R_{17} = 1-18C$  alkyl,  $7-9C$  phenylalkyl, cyclohexyl, phenyl or group represented by formula (11);

$R_{21}, R_{22} = 1-4C$  alkyl or  $7-9C$  phenylalkyl group;

$R_{23} = H$  or  $1-4C$  alkyl group;

$R_{24} = 1-5C$  alkyl group;

$R_{25} = H$  or  $1-5C$  alkyl group;

$R_{26} = H$  or  $CH_3$ ;

$R_{27} =$  single bond, methylene,  $-CH(R_{29})$ ,  $S$  ;

$R_{29} = 1-4C$  alkyl group;

$r = 1$  or  $3$ ;

$R_{28} = N(CH_2CH_2O-)_3$  when  $r=3$ , or  $1-18C$  alkyl, halogen atom,  $OH$  or  $1-8C$  alkoxy group when  $r=1$ ;

(c) is a phenol antioxidant.

USE - The stabilizer is useful for producing synthetic polymers, oils, fats, lubricating oils, mechanical oils, etc.

ADVANTAGE - The stabilizer provides excellent stability against light, oxidation, heat, etc. to organic polymers.